

Grejfrutowy sour ale

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **27**
- SRM **4.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

Steps

- Temp **52 C**, Time **15 min**
- Temp **63 C**, Time **20 min**
- Temp **73 C**, Time **45 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **10.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **20 min** at **63C**
- Keep mash **45 min** at **73C**
- Keep mash **15 min** at **78C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|----------------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 2.7 kg (48.2%) | 80 % | 5 |
| Grain | Słód pszeniczny Bestmalz | 0.7 kg (12.5%) | 82 % | 5 |
| Grain | Słód Caramunich Typ II Weyermann | 0.1 kg (1.8%) | 73 % | 120 |
| Adjunct | Koncentrat grejfrutowy | 2 kg (35.7%) | 50 % | 2 |
| Adjunct | Łuska ryżowa | 0.1 kg (1.8%) | 1 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Lublin (Lubelski) | 35 g | 60 min | 4 % |
| Boil | Cascade | 50 g | 10 min | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|-------|--------|------------|
| US 05 | Ale | Slant | 100 ml | --- |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------------|--------|---------|----------|
| Other | Lactobacillus | 5 g | Mash | 1440 min |
| Water Agent | Kwas mlekowy | 12 g | Mash | 60 min |
| Water Agent | Pożywka drożdżowa | 4 g | Boil | 15 min |